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ABSTRACT

Central to this collection of nine papers is the unifying theme of excellence and quality in the American educational system with emphasis on the role of educational technology. Although each paper addresses a different audience, the content of each is similar with respect to the U.S. Department of Education's role in providing funds for such projects as: (1) a research conference on computers in education; (2) an occupational education program in high technology for secondary youth; (3) computer-assisted instruction (CAI) programs for basic skills instruction and teaching secondary math in grades 9 through 12; (4) utilizing data processing systems in developing instructional and management programs; (5) Project QUILL, which uses microcomputer software to teach writing in grades 3 through 6; (6) a project using computer-assisted instruction to teach math and reading in the elementary grades and special education; (7) using technology in vocational training; (8) teacher training in computer literacy; (9) the Network Lighthouse project, which designates model programs in schools which use technology to achieve quality math/reading programs; and (10) Project BEST which uses telecommunications to share information among and between the states. Also discussed are the decline of education in the past two decades; criteria and means by which the government selects outstanding public schools at the secondary level; the role of the National Diffusion Network in disseminating model educational programs to local schools; and the need for other nations to share information and ideas in the field of education. (DJR)

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A COLLECTION OF PAPERS CONCERNING

TECHNOLOGY AND EDUCATION

Presented at various sites between January 17, 1983

and April 6, 1983

by

Donald J. Senese

Assistant Secretary

Office of Educational Research

and Improvement

U.S. Department of Education

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OPENING REMARKS FOR THE COMPUTER LITERACY REVIEW PANEL

by

Donald J. Senese
Assistant Secretary
Office of Educational Research
and Improvement

January 17, 1983

Good morning. On behalf of the Department of Education, and in particular the Office of Educational Research and Improvement, welcome to the first meeting of the Computer Literacy Review Panel. You are embarking upon important work. A busy agenda faces you so I will keep my remarks brief.

I am sure, however, that you are interested in some of the other work being done under the auspices of our office and how it relates or might relate to the work that you are doing.

The computer, as all of you are acutely aware, is a dynamic force in today's world. Indicative of what this bodes for our society is the naming by Time magazine of the computer as "Man of the Year"; or as they titled it, "Machine of the Year". The important thing is that the editors of Time felt that the impact upon our way of life by the computer was far greater than that of any individual or group.

And, its importance and effect can not be ignored. U.S. Secretary of Education, Terrel H. Bell challenged those of us in the field of education with an initiative on educational technology. At a National Teleconference on Educational Technology held on June 22, 1982, in Washington, D. C., Secretary Bell said:

> The growing computer industry has been a major cause of the increased demand for individuals with basic and higher level skills, particularly in the related fields of math and science. We should assist school districts to explore uses of technology to improve skill instruction, to prepare for employment, and to increase the productivity of teaching.

According to a survey conducted by the N.C.E.S. the number of personal microcomputers available for instructional use by public school students tripled between fall of 1980 and spring of 1982. In the spring of 1982 a total of 120,000 microcomputers and computer terminals were available to public school students.

Under the block grants to the states, local school districts will be able to utilize their funds to purchase computer hardware and software. More and more school systems will be entering and/or expanding their use of computers and computer instruction. Educators must respond to this growing demand.

As we examine the direction or directions to be taken under the technology initiative, and in order to explore the dramatic changes being brought about by the computer, projects and programs such as the one with which you are all associated, are being funded and supported by the Department of Education. Your meeting today is part of a five-year plan for education technology data collection by the National Center for Education Statistics.

In recognition of the need for long term systematic studies on the subject, the Department recently sponsored a Conference on Research in Computers in Education which was hosted by Carnegie-Mellon University and the University of Pittsburgh. The purpose of the meeting was to look at research which the participants had been conducting on computers in education, as well as taking a look at the contribution research has to make to realizing the potential of the computer in education. A strong focus was on the need for future research on some of the issues we will be facing in the "computer age".

In a program of a different nature, the National Diffusion Network awarded grants to four Lighthouse Projects in Technology. The projects were designated as Lighthouses because they could make a wide array of computer applications available for observation in addition to disseminating their specific computer applications.

The programs are:

- o Project C.O.F.F.E.E. or the Cooperative Federation for Educational Experiences is located in Oxford, Massachusetts. It offers a regional alternative occupational education program in high technology to secondary school age youth, some of whom were previously school dropouts. C.O.F.F.E.E. is noteworthy for the exemplary school/business partnership which it has formed with the Digital Equipment Corporation of Bedford, Massachusetts and for which it received a Presidential Commendation. Digital has been extremely supportive of school efforts to learn about and use computers. In one program they donated a bus to the Worcester county schools and outfitted it with donated Digital Corporation equipment. Twenty four junior high schools will participate in a three year program which allows each school a one month use of the bus. As part of the program, three teachers in each school will be trained in the rudiments of computer programming and the principles of teaching and utilizing computer skills in the classroom. When the bus leaves a school, Digital will then give them five "robbins" --desk top micro-computers, free of charge.

Another NDN Lighthouse Program is--

- o The Merrimack Education Center in Chelmsford, Massachusetts. It is a computer assisted instructional program developed to assist in the improvement of basic skills instruction for compensatory education

populations. The program staff includes professional educators who are available to provide technical assistance in introducing successful computer applications to the schools. The project consists of four main components: (1) Computer Assisted Instruction, (2) School System Computer Support, (3) Computer Training and (4) Computer Software Exchange Library.

- In Asbury Park, New Jersey, the Board of Education offers a course which utilizes computer assisted instruction for secondary mathematics courses in grades 9-12. Educational software designed for the purpose of integrating computer-assisted instruction with traditional techniques utilized in teaching Algebra I, Algebra II, Geometry, Trigonometry, Calculus, and Applied Mathematics has been developed and field tested for purposes of the program.
- The Evaluation Center, Hopkins Public Schools, Hopkins, Minnesota is involved in the implementation and utilization of data processing systems in the administrative, management, and instructional functions of schools. Most recently, the staff is concentrating on the utilization of microcomputers. They are attempting to achieve the proper blending of the new microcomputer technology with valid and acceptable educational practices in the development of new instructional and management programs.

Another set of programs operate under contracts awarded through Research and Improvement's Office of Libraries and Learning Technologies. These are programs which utilize technology to improve teaching of the basic skills. Each is directed toward a different skill. They are: communication, mathematics, and reading.

- The communication project is known as Project Quill. They use a set microcomputer-based programs around which several instructional activities have been developed. The activities are geared to young writers in grades 3 to 6. Quill utilizes the microcomputer's technological capabilities to help teachers teach writing. The youngster's natural enthusiasm for anything connected with the computer strongly motivates them to write and to perform the various tasks which are a part of the program. It has helped to eliminate the drudgery of rewriting compositions by hand. Corrections and rewrites can be made quickly on the word processor and a print-out secured.
- The second project is in the field of mathematics; it is being designed by faculty at the Ohio State University. After reviewing existing program using technology, they will develop and demonstrate a new curriculum and methodology designed to improve learning for the average student in the elementary grades which will have appropriate applications for handicapped, gifted, and culturally diverse children.
- The reading project, directed toward the same population, will be designed by WICAT, Inc. of Orem, Utah.

Of course the computer is only part of a great advance in technology which can be used for educational purposes. Technology can be utilized for training. In an attempt to demonstrate, the N.C.E.S. held a video-conference in connection with the Vocational Education Data System survey. I was proud to participate in that effort. A teleconference was held in which individuals at 45 participating sites were trained to fill-out a vocational education survey program.

The Office of Educational Research and Improvement is sponsoring 3 contracts the purpose of which is to look at existing software for micro-computers in the areas of:

o reading

o mathematics and science

and

o foreign language

Those working on these contracts will assess the educational needs for software by finding out from teachers, administrators, and curriculum specialists what is currently available but more importantly what are the educational needs in these areas.

I am delighted to find that one of the principal investigators of one of those projects, Bob Tinker, President of TERC is among your group. It provides an important link between the investigation of the needs of educational software and computer literacy.

I commend NCES for their efforts, represented by sponsorship of meetings such as the one today, in technology. Other work that they are doing such as data gathered and reported in the Fast Response Surveys is extremely helpful and useful to the technology effort.

I commend NCES and their computer literacy workshop effort. I wish you well in you deliberations.

Defining computer literacy is an elusive and difficult task. It is a term that a lot of people are using but laymen as well as experts do not agree on a meaning. In its present context it could be used for anything from pushing a few buttons to doing programming. It needs to be more precisely defined.

The task of getting a definition of computer literacy is an important part of your work. I hope that the sessions of the next two days will be fruitful ones for you as you begin to investigate this and the other questions at hand.

Overview of Current Initiatives and Programs of the U.S. Department of Education's Office of Educational Research and Improvement

Northeast Louisiana University

Monroe, Louisiana

January 20, 1983

10:00 A.M.

Good Morning.

It is a pleasure to be speaking before faculty members of Northeastern Louisiana University. Since assuming the position of Assistant Secretary for Educational Research and Improvement, this is my third visit to the great state of Louisiana but my first visit to Monroe, Louisiana.

The heroic spirit of your people during the recent floods impressed Americans throughout our country.

I am pleased to have this invitation to visit the campus of one of the growing and dynamic institutions of higher education in this state.

It is especially pleasing to visit with a former colleague of mine from my days as a college teacher, Dr. Richard Chardkoff. From my years of working with Dr. Chardkoff, I can assure you that your school is fortunate in having a person of his academic credentials, intellectual skill, and dedication to education as a member of your faculty.

It is no secret that a "technology revolution" is here and has important consequences for education. It was especially pleasing to participate in the opening of your Computer Assisted Learning Laboratory in Sandel Library. You have established a center where your students can enhance their learning through the computer.

I am always pleased to have the opportunity to speak to and exchange ideas with members of the educational community.

I would like to take this opportunity to talk with you about some of the current programs and initiatives in the U.S. Department of Education, particularly those of the Office of Educational Research and Improvement.

Currently, a primary focus in the Department is that of promoting excellence in education. Every student should be receiving a quality education that prepares him or her to successfully pursue higher education or enables him or her to be a trainable member of the workforce.

Why the concern about excellence? Schools in America have long had a reputation for their outstanding ability to educate large numbers of individuals in a superior manner.

We are excelling in numbers of students being educated. The equality and availability of educational opportunity for all the members of our society is beyond compare. During the 1980's enrollment in institutions of higher learning has reached an all-time high of over twelve million. Such a statistic supports the notion that we still have faith in the ability of education to offer us the background and abilities necessary to achieve a lifestyle consistent with the American dream.

Unfortunately, there has been a let down in quality during the past one or two decades. We have witnessed a steady decline in the Scholastic Aptitude Test (SAT) scores of students. Although last year's scores showed a slight increase for the first time in many years, it is too soon to tell whether or not that upturn indicates a reversal in trend or a fluke.

Further, we have a growing number of students, completing not only elementary and secondary school but college as well, who cannot properly read and write.

We find students taking easy courses--sometimes referred to as lifestyle courses--in place of rigorous academic studies. These courses neither challenge them intellectually nor prepare them for an increasingly complex, technological world.

We even find that many of our brighter people in the teaching profession are leaving. Their replacements are, in many cases, those who lack the goal of excellence in education.

You are all educators. You know that some things are right with American education and some things need improving.

However, the complex, technological, and information-based society which will be the adult world of students now in school demands that we offer them nothing less than the best.

Defining what is meant by "excellence in education" is not an easy job. In recognition of the difficulty of this task but appreciating the necessity for doing so, on August 26, 1981, U.S. Secretary of Education, Terrel H. Bell, named the members of the U.S. Commission on Excellence.

Secretary Bell charged the members with the following responsibilities:

- o To review and synthesize data on the quality of learning in the nation's schools, both public and private;
- o To examine, compare, and contrast the curricula, standards, and expectations of the educational systems of several advanced countries with those of the United States;
- o To study a representative sampling of university and college admission standards;

- o To hold hearings, receive testimony and expert advice on efforts that could and should be taken to foster high levels of academic excellence in the nation's schools, colleges and universities; and,
- o Review and describe those school programs that are recognized as preparing students who consistently attain higher than average scores on college entrance examinations.

The panel is looking at education in America in order to see what has gone wrong and to consider how things can be improved. The report of the Commission is due to be completed by the end of March of this year.

It is not the purpose of the Commission to set national standards, nor will it attempt to do so. The Reagan Administration very strongly supports each state's authority to operate and administer its own school system.

In naming the Commission, Secretary Bell said that the Commission could make "practical recommendations for action" to public officials, educators, parents and others who set school policies.

The work of the Commission is exciting. Perhaps more than any one individual program or project it is stimulating positive activity in the educational arena. It is causing parents, students, business leaders, as well as educators to focus attention on education.

The Commission has held hearings throughout the country on the various topics that they have been investigating. In the various communities they also held dinners with business leaders, prominent citizens and educators so they

could communicate with these individuals, on a one to one basis, getting their ideas and feelings regarding education within their local community as well as in general.

All of the research and information gathering by the members has been completed. They are now in the process of preparing their report. The interest that it generates both within the educational community and the nation-at-large will be very exciting.

As another facet in the program to identify and acknowledge excellence in education, Secretary Bell has just announced a program which will give recognition to outstanding public schools at the secondary level, schools which can be described as turning out students who are "well-prepared".

The chief state school officer within each state will be able to submit nominations for the award from within his or her state.

A panel of 15 individuals, none of whom is an employee of the Federal government, will review the schools which have been nominated and will select those which show that they have the attributes of an "effective school" for public recognition by the Secretary of the Department of Education.

Secretary Bell would like to see this program develop some interest in the question of what makes a school successful. In describing his new program he said:

> ...if we also spark a little debate or controversy over the qualities that make a school stand out above the others, so much the better. Perhaps one means for improving education is the proper utilization of the technological advances of the past decade. The integration of technology into the learning experience, in the proper way, can lead to improvements which can upgrade the quality of education for students everywhere.

At a National Teleconference on Educational Technology held on June 22, 1982, in Washington, D.C., Secretary Bell announced that technology would be one of his major initiatives in education. There were over forty-five state sites, including the one in D.C., that participated in two days of activities highlighting technology in education.

The computer is, without a doubt, one of the most dynamic forces in the world today. Indicative of what this bodes for our society is the naming by Time magazine of the computer as "Man of the Year"; or as they titled it, "Machine of the Year". It is important to consider that the editors of Time felt that the impact upon our way of life by the computer was far greater than that of any individual or group.

The Office of Educational Research and Improvement was selected by the Secretary to take the lead in implementing his initiative on technology. In that regard, we have become involved with a number of interesting and exciting educational programs.

Our Office of Libraries and Learning Technologies is monitoring several contracts which utilize technology to improve the teaching of the basic skills. One of these is a communication program known as Project Quill. It uses a set of microcomputer-based programs around which several instructional activities have been developed. The activities are geared to young writers in grades 3 to 6. Quill utilizes the microcomputer's technological capabilities to help teachers teach writing. The youngster's natural enthusiasm for anything connected with the computer strongly motivates them to write and to perform the

various tasks which are a part of the program. It has helped to eliminate the drudgery of rewriting compositions by hand. Corrections and rewrites can be made quickly on the word processor and a print-out secured.

The National Diffusion Network operates under the auspices of the Office of Educational Research and Improvement. Through the N.D.N. model educational programs are disseminated to local school districts which desire to use them.

The N.D.N. is able to help local school districts avoid reinventing the wheel. For example, an excellent program might exist in a school district in Pennsylvania. It might be ideal for helping to solve an existing educational problem in Massachusetts, Oregon, or Texas or Louisiana but how are teachers and administrators in those states going to be made aware of the program?

It is the purpose of the N.D.N. to disseminate such programs. The Joint Dissemination Review Panel assesses program applicants; programs which meet the established criteria are eligible for dissemination.

Outstanding programs which contribute to academic excellence are selected to receive funding for purposes of dissemination of information to other school districts throughout the country. The option of whether or not to adopt a program is, of course, at the discretion of the school officials within that district.

As a result of the current emphasis on technology, the National Diffusion Network awarded grants to four Lighthouse Projects in Technology. The Lighthouse Projects are designated as such because they are using technology to enhance education in an outstanding way. The Federal grants will enable those schools to host visitors from all over the country and to provide material on their adaptations of technology to school use.

The programs are:

- o Project C.O.F.F.E.E. or the Cooperative Federation for Educational Experiences located in Oxford, Massachusetts which offers a regional alternative occupational education program in high technology to secondary school age youth, some of whom were previously school dropouts. C.O.F.F.E.E. is noteworthy for the exemplary school/business partnership which it has formed with the Digital Equipment Corporation of Bedford, Massachusetts and for which it received a Presidential Commendation. Digital has been extremely supportive of school efforts to learn about and use computers.
- o The Merrimack Education Center in Chelmsford, Massachusetts. It is a computer assisted instruction program developed to assist in the improvement of basic skills instruction for compensatory education populations. The program staff includes professional educators who are available to provide technical assistance in introducing successful computer applications to the schools. The Project consists of four main components: (1) Computer Assisted Instruction, (2) School System Computer Support, (3) Computer Training and (4) Computer Software Exchange Library.
- o In Asbury Park, New Jersey, the Board of Education offers a course which utilizes computer assisted instruction for secondary mathematics courses in grades 9-12. Educational software designed for the purpose of integrating computer-assisted instruction with traditional techniques utilized in teaching Algebra I, Algebra II, Geometry, Trigonometry, Calculus, and Applied Mathematics has been developed and field tested for purposes of the program.

o The Evaluation Center, Hopkins Public Schools, Hopkins, Minnesota is involved in the implementation and utilization of data processing systems in the administrative, management, and instructional functions of schools. Most recently, it is concentrating on the utilization of microcomputers. The staff is attempting to achieve the proper blending of the new microcomputer technology with valid and acceptable educational practices in the development of new instructional and management programs.

As you can see, we are involved in some important projects in the area of technology. However, it is important to note that the role of the federal government is a limited one. There are no plans to return to the type of programs offered in the 1960s in which large sums of federal monies were spent on a wide range of educational projects.

Instead, the Reagan Administration, under the New Federalism, is trying to stimulate an atmosphere which encourages schools to get involved with instructional technology, to share information on technology, and to get the private sector more involved in instructional technology.

We are not only entering a new age in technology but a new age in educational responsibility and decision-making. The Reagan Administration, particularly through the Education Consolidation and Improvement Act (ECIA) or block grant approach, has been turning decision-making authority and finances

back to the States and local school authorities. The purpose has been to reduce federal control while enhancing the decision-making process at the State and local levels.

Therefore, there will be more responsibility on State and local school officials to become aware of the advantages of instructional technology and how it can best be adjusted to local needs.

In planning for the educational needs of both those still in high school, as well as those at the college level, the National Center for Education Statistics is currently conducting a large-scale, longitudinal survey, "High School and Beyond" which contains data about high school seniors and sophomores starting with the year 1980.

There was a group-administered survey in the spring of 1980 with planned follow-ups on the same national sample for 1982 and 1984. The sample for the study included 1,100 high schools. Thirty-six seniors and thirty-six sophomores per school were surveyed, or all of the senior and sophomore class if the class did not contain 36 members.

Response was high with 91 percent of the schools contacted participating. In all, 1,015 schools responded with 30,000 sophomores (out of 3,800,000) and 28,000 seniors (out of 3,000,000) participating.

Questionnaires and cognitive tests were administered to each student in the High School and Beyond sample. The first phase survey included information about such items as: high school experiences of the student; activities outside of school; attitudes about school, themselves, their aspirations; and plans for after high school.

The study is similar to one which was conducted in 1972 but more comprehensive and broader in scope. For example, the 1980 survey includes information about parents' aspirations for their children as well as teachers assessment of their students' futures. These factors were not included in the first study.

The National Institute of Education has a new director. NIE is going forward with plans to continue research on quality education, effective schools, and uses of technology in education.

I have attempted to give you a brief overview of some of the initiatives and programs of the Office of Educational Research and Improvement and I have tried to emphasize information which I believed would be of interest and benefit to you.

It is a pleasure to be here at this outstanding institution of higher education. I wish you well in your efforts.

"Excellence and Technology in Education:
Patterns for Success"

by

Dr. Donald J. Senese
Assistant Secretary for Educational
Research and Improvement
U.S. Education Department

Delivered for
Conference of HOSTS - Partnership in
Excellence - "Sharing More Success"

Vancouver, Washington
February 17, 1983

Good afternoon

It is a pleasure to be here in one of the most exciting, and beautiful sections of our country - the historic Northwest. I am visiting in an area where the Vancouver school system has many new and innovative programs to enhance education. And I am especially pleased to have the opportunity to address all of you and be part of the HOSTS Math and Reading Projects Conference. I congratulate you on your positive theme: HOSTS - Partnership in Excellence - "Sharing More Success."

I would like to explore with you today some of the initiatives and work of the U.S. Department of Education especially the Office of Educational Research and Improvement. I would particularly like to focus on a topic which holds a high priority in the administration of President Reagan -- Excellence in Education.

It is an area of vital importance. No matter what other programs or initiatives we might attempt to implement in the educational arena without a concern for and a conscious attempt to have excellence other efforts will be futile.

We are doing an impressive job of educating many students from a variety of economic and ethnic backgrounds; we are doing great in quantity but not very well in quality. As that great scholar of the American educational system Dr. Russell Kirk has noted: "A great many are schooled; very few are educated."

In his State of the Union address this year, President Ronald Reagan focused on this very issue. In urging a widening of our education horizons, the President stated:

> We Americans are still the world's technological leader in most fields. We must keep that edge, and to do so we need to begin renewing the basics -- starting with our educational system. While we grew complacent, others have acted. Japan, with a population only about half the size of ours, graduates from its universities more engineers than we do. If a child does not receive adequate math and science teaching by the age of 16, he or she has lost the chance to be a scientist or engineer.
>
> We must join together -- parents, teachers, grassroots groups, organized labor, and the business community -- to revitalize American education by setting a standard of excellence.

In examining the question of excellence, one might ask just what comprises excellence in education. And, to be sure, that is not an easy question to answer. The phrase itself is simple enough, but the implications which it holds for educators who are attempting to deal with modern day problems of education indicate a highly complex problem.

You who are here today, and are associated with the HOSTS Reading and Math Programs, have in your efforts to improve student achievement in these subject areas demonstrated a concern for excellence. You have already recognized the part that individual student achievement plays in the total educational picture. Two of the most important elements of education you are addressing -- reading and math. If a student cannot master reading -- to make sense and to understand the meaning of the letters on a page -- all other subjects become dull and meaningless because the key to mastering other subjects has not been obtained. Dr. Mortimer Adler, philosopher and teacher and one of the founders of the Great Books Foundation, has noted--perceptively and sorrowfully--

> I don't think children in school are taught to read anymore. I am not talking about functional literacy; I'm talking about real reading.

In the HOSTS reading program, I have been impressed with your efforts to enlist citizen and business participation -- I understand over 30,000 nationally -- in addition to computer technology to improve student reading achievement. Your computerized data base involving the cross-referencing of materials for teaching as well as indexing of materials to the learning objectives in the mastery of reading skills is most impressive.

The HOSTS Math program deserves recognition in its approach to improve math achievement. The organization of the precise sequence of math skills, the emphasis on mastering one skill before the next is attempted, the tutoring to remedy deficiencies as well as the precise assessment, recording keeping, and review of materials all contribute to the comprehensiveness of your approach. Recognizing one of the great changes in education, your program is especially useful and relevant since it is available in paper and/or computerized format.

It is dedicated individuals like all of you who can bring these programs to thousands of students as a means to improve learning and to respond to the President's call for excellence in education.

Allow me to return to my broader theme of excellence and quality in the American educational system.

Over the past decade or two, many people, both within and outside the educational community, have come to question the quality of the education being provided by most of our schools, and their concerns are not without foundation. Unfortunately, certain factors indicate that the education being offered to most young people is not what it should be.

Employers are expressing disappointment with the secondary, and even college, graduates who are now or have recently entered the workforce. A high percentage of these recent graduates have not mastered even the basic skills. Many have difficulty with spelling, use of correct grammar, and simple mathematical computations. Many could be defined as functional illiterates. Whatever title we might designate for these unfortunate individuals is unimportant, the fact is that individuals who lack the basic competencies do not form the basis of a trainable, appropriate workforce needed by business and industry to meet our nation's goals.

The problems experienced by such persons are tragic for them on a human level to say nothing of the dangerous position in which it places our nation. The success of our educational system is intimately tied to our national security.

For the past decade, Scholastic Aptitude Test scores have shown a decline. Last year for the first time since the decline began, there was a very slight upturn. A number of individuals would like to believe that the scores have bottomed out, that improvement is already here. Hopefully, such an assessment is correct. But whether or not the upturn is just a one time improvement or the beginning of a definite turn around that will show increases in future years as well, the low level which these scores have reached nationwide indicate a long uphill battle to really signify any real improvement in the schools.

It has taken some courage to acknowledge and confront the fact that something is wrong with our schools. Most of us have always accepted, without question, that our nation's schools were engaged in the business

of education and that students were being taught in a superior fashion reading, writing, and arithmetic with proper doses of history and other academic disciplines as part of a rigorous curriculum.

Somewhere along the way, something has gone wrong. So-called "lifestyle" courses have crept into the curriculum overloading the teacher; watered-down versions of basic courses have taken their place in the curriculum. A course titled "The Study of Communications and the Media" might replace a course in English. "Business math" or "consumer math" may meet the requirement for math in the curriculum. History is no longer approached as a systematic study of events which made us into the nation and the people we are, but rather looked at through some watered-down thematic approach which does not resemble history as it should be taught. Courses like "Problems of Democracy" or "Twentieth Century Social Problems" have replaced the rigorous history courses taught in our schools in previous years. If we are unsure from where we came, how can we know where we are going?

These "fun" or "life-style" courses teach very little which is worthwhile or useful. Students retain very little of value once the course is completed. These courses are not the way to stimulate the imagination and desire for learning of the young; they fail to provide young people with the education they need or deserve.

Given the opportunity, most young people want to learn; their education should be a rewarding experience. Every single student enrolled in school should have the opportunity to receive an excellent education, one which provides them with the tools necessary for further education, gainful employment, and a fulfilling lifestyle.

Recognizing the importance of education, and concerned about its current direction, the Reagan Administration has given a return to excellence a high priority.

A major difficulty in attempting to remedy current problems in the schools is that of understanding just what it is that schools aren't doing. Why are they failing? What is wrong with the educational programs that they offer?

In order to do this, and consequently improve the educational atmosphere within such schools, we need to identify what it is that constitutes an effective school. There are such schools. These are schools which go beyond the average in motivating and academically preparing their students.

The National Institute of Education, a component of OERI, has been engaged in looking at what is needed in order to improve the instructional effectiveness of schools. While there are many and varied characteristics of schools which display a consistent degree of instructional effectiveness there appear to be some bottom-line characteristics which run as a common thread throughout these schools:

- o strong administrative leadership by the school principal, especially in regard to instructional matters;
- o a school climate conducive to learning; i.e., a safe and orderly school free of discipline and vandalism problems;
- o school-wide emphasis on basic skills instruction which entails agreement among the professional staff that instruction in the basic skills is the primary goal of the school;

- o teacher expectations that students can reach high levels of achievement, regardless of pupil background; and
- o a system for monitoring and assessing pupil performance which is tied to instructional objectives.

Simple and basic criteria, and yet, apparently, these are lacking in many of the schools across our nation. Perhaps, there are other ingredients as well or at least a special way of employing these characteristics which makes a school "work" -- a school that is able to provide the type of educational atmosphere in which students succeed year after year.

Perhaps by identifying these schools and by giving some exposure to their programs other schools could benefit. Effective schools seem to be the exception rather than the standard. This needs to be changed. School officials need to be exposed to successful schools, the programs that they offer, and the way in which they offer them. This would enable other schools and school districts to replicate successful programs if they met that school system's needs.

As part of a program to identify schools which have programs that could be identified as excellent, U.S. Secretary of Education, Terrel H. Bell is implementing a program to acknowledge outstanding public secondary schools throughout the country. A separate program will be initiated for recognition of outstanding private schools.

Fifteen-member panels of experts in the field of education, made up of individuals not affiliated with the Federal government, will review nominees for recognition of their school program. Public high schools, as well as middle and junior high schools, will be nominated by each state's chief school officer.

The attributes for an effective school which will be judged by the panel include: clear academic and behavior goals; order and discipline; high expectations for students; teacher efficacy; rewards and incentives for teachers and students; positive school environment; administrative leadership; community support; extent of concentration on academic learning time; frequent and monitored homework; regular and frequent monitoring of student progress; well-coordinated curriculum; variety of teaching strategies; and opportunities for student responsibility.

Those selected by the panel will receive public recognition. They will be awarded a plaque in honor of their outstanding achievement or achievements.

It is hoped that national attention will be focused on some of the good qualities of some of the public schools throughout the nation. While it is understood that not everyone will agree on the qualities that cause one school to be better than another, attempting to look at the question is a step in the right direction.

If we can focus attention on what is right with American education, perhaps it will have positive ramifications. In introducing this program Secretary Bell said:

> ...if we also spark a little debate or controversy over the qualities that make a school stand out above the others, so much the better...

Also very much concerned with the issue of what makes a good school is the Secretary's National Commission on Excellence in Education. Hard at work for over a year its work will be completed by the end of March. The Commission is providing what is probably one of the most comprehensive, intensive looks at education throughout the country that has ever been done.

It would be against the policies of the Reagan Administration, which strongly supports each state's authority to operate and administer its own school system, for the Commission to attempt to set any type of national standards. It will not. What it will do, as charged by Secretary Bell, is to make "practical recommendations for action" to public officials, educators, parents, and others who set school policies.

I wish to again call attention to the work all of you are doing to promote excellence in education. Those of you who are affiliated with HOSTS are part of an organization which is providing important, vital services to the students in many of our schools.

Private sector initiatives are extremely important at the present time. The money and the resources that the business/industry sector makes available for use in educational programs is important. They are providing for programs that taxpayers money can not do alone. With assistance education can be upgraded, equipment purchased, things that might not be otherwise available can be secured. All of this is of extreme importance toward improving American education.

But, you, as individuals, have taken a step to deal with an educational problem. That is just as important, and you are to be commended. Many feel that as one person there is little that he or she can do. Often an individual will say -- 'What can I do? How can I help? I can't be effective alone.'

Maybe some of you were once in that position, lulled into inaction because you felt that you would not make a difference. For you HOSTS has now provided an answer.

The results that you have with students is, I am sure, sometimes, but not always, dramatic. It is, however, always important. The work that you do with students is important to you as well as to the community at large. Most significantly it is important to the individual students with whom you work; you are having a profound effect on the lives of young people -- a very positive influence.

The impact that this could have on education in America causes me to stop and think. Imagine how few problems we would have if every one of our citizens would take the time, make the effort to Help One Student to Succeed -- and every one that is helped is important.

And now, before concluding, I would like to discuss with you another area of prime consideration within the U.S. Department of Education -- technology, and its applications to education. The Secretary of Education has given the Office of Educational Research and Improvement the lead role in this area.

On June 22, 1982, in Washington, D.C. at a national teleconference held in Washington, D.C., Secretary Bell said:

> The growing computer industry has been a major cause of the increased demand for individuals with basic and higher level skills, particularly in the related fields of math and science. We should assist school districts to explore uses of technology to improve skill instruction, to prepare for employment, and to increase the productivity of teaching.

Dealing with technology is one of the most significant challenges educators have faced in modern times. It is incumbent on those of us who are in the field of education to look at the very least at the technology available to us today, and to consider the even more sophisticated technology that is rapidly becoming available.

We must deal with the impact that technology will have upon the generation of students now in school. These children and young people will be the first generation to live out their adult lives in what is now being referred to as "the information age." How we act upon this knowledge, and prepare today's students for this inevitability, will determine their ability to cope with the world at hand as well as our nation's ability to maintain its status among nations.

Education is the key to dealing with technology. We can not ignore the facts before us. As educators we can not allow the complexity of the situation to overwhelm us into inaction.

Our country -- even the world -- is undergoing a shift where the emphasis will be moving from an industrial economy to an information-service economy. The "technological revolution" is not in the future; it is here now. From videogames to the microcomputer to additional uses of the silicon chip, technology is changing our way of life and our society.

The Office of Educational Research and Improvement has been working with other offices in the U.S. Education Department to identify uses and the potential of technology to improve education. OERI sponsored a conference in Pittsburgh this past November bringing together over forty experts whose task was to identify the key research issues for computer use in the fields of math, science, reading, and writing. I believe the final report will be a tremendous help to educators. OERI has worked with state and local educators, through our Office of Libraries and Learning Technologies, to assist State and local education leaders to identify the issues and opportunities in instructional technology and to

provide training. Through the Office of Libraries and Learning Technologies and the National Diffusion Network, we have worked with the U.S. Education Department's ten regional offices to assist dissemination projects in technology and provide opportunities for teacher training in computer literacy. Presently, the National Center for Education Statistics, a part of OERI, is holding meetings of experts to examine the whole question of computer literacy. The National Diffusion Network has been active in identifying outstanding programs in technology which would be beneficial to school districts throughout our country.

The National Diffusion Network in implementing Secretary Bell's goals in technology has recognized "Lighthouse Schools" projects in an attempt to focus on outstanding applications of technology to classroom and educational needs. The "Lighthouse Schools" are hosting visitors from all over the country and providing material on their adaptations of technology to individual school use. We have received a great response and I've had the opportunity to visit three of our four "Lighthouse" projects. So far, there are four programs which have been so designated. They are:

- o Project C.O.F.F.E.E. or the Cooperative Federation for Educational Experiences which is located in Oxford, Massachusetts. It offers a regional alternative occupational education program in high technology to secondary school age youth, some of whom were previous school dropouts. C.O.F.F.E.E. is noteworthy for an exemplary school/business partnership.

- o The Merrimack Education Center in Chelmsford, Massachusetts. It is a computer assisted instruction program developed to assist in the improvement of basic skills instruction for compensatory education populations. It includes computer assisted instruction, school system computer support, computer training, and a computer software exchange library.
- o In Asbury Park, New Jersey, the Board of Education offers a course which utilizes computer assisted instruction for secondary mathematics courses in grades 9-12. Educational software designed for the purpose of integrating computer-assisted instruction with traditional techniques utilized in teaching Algebra I, Algebra II, Geometry, Trigonometry, Calculus, and Applied Mathematics has been developed and field tested for purposes of the program.
- o The Evaluation Center, Hopkins Public Schools, Hopkins, Minnesota is involved in the implementation and utilization of data processing systems in the administrative, management, and instructional functions of schools. Most recently, it is concentrating on the utilization of microcomputers. The staff is attempting to achieve the proper blending of the new microcomputer technology with valid and acceptable educational practices in the development of new instructional and management programs.

I know that those of you associated with HOSTS have been involved in combining and adapting technology to the reading and math projects. In doing so you have shown the foresight and adaptability characteristic of HOSTS throughout it successful history.

I am pleased to be able to be here in person to inform you of the selection of HOSTS as the fifth National Diffusion Network Lighthouse project. You have been designated as a Lighthouse because of your ability to utilize technology in an outstanding way to enhance education. This designation places you in a position of leadership; others will be looking to you for guidance.

My very best to you as you embark upon this new and challenging endeavor and every success in your great work to improve American education.

Remarks for Secretary's Regional Representatives

U.S. Department of Education

February 1, 1983

Good morning. It is a pleasure to be here this morning and to see those of you who represent the Department of Education in the Regional Offices. My purpose in being here is to focus attention on the new awards for teacher training in computer literacy and the use of technology in education at the state and local levels.

Recognition of the importance of the computer, and the impact which it is having upon our society, is obvious and dramatic. It provides us with the ability to change our world--improve our capacity to learn--improve our ability to educate our young people--indeed, improve our entire way of life.

We must remember, however, that it is still a machine. As with any machine, it is only through interaction with humans that its potential can be realized.

Consequently, we have been cast into the role of pioneers; the pioneers of an information age. Many of us have, at time, envied our forefathers feeling that they lived in an age that was more exciting than ours--founding a nation--developing a constitution for the newly founded union of states--opening up the West and facing the many perils that entailed.

We are really, however, no less pioneers than they. How we face and deal with the challenge that has been placed before us will determine for future generations their destiny, just as our forefathers acceptance of their challenges determined our destiny today.

Young people are excited and enthusiastic about approaching the challenge. Their natural curiosity draws them to the computer; they approach its usage with a sense of adventure characteristic of youth. They want to use it; they want to be a part of its awesome capabilities.

Local school districts are varying in their response to the computer, and how they want to utilize it in their educational programs. Most are, however, showing interest, whether they have as yet purchased any equipment.

The block grants are making available to local school districts the opportunity, if they so desire, to now purchase computer equipment.

One problem that many school districts face, despite the fact that they would like to introduce the computer into their educational programs is that most teachers are not, as yet, "computer literate". What it means to be "computer literate" is a term which in itself still needs to be refined but suffice it to say that with no knowledge about computers a teacher can not be expected to utilize them in his or her classroom or to help educate students in their usage.

Consequently, it is imperative that more opportunities be provided for local school districts to train their teachers in computer usage. That is the purpose of these new awards. You are to be a part of this; it is hoped that they will be a stimulus which will encourage regional coordination as well as aid the development of further training which meets the needs of the state and local educators within your regions.

Script for AECT World Teleconference

Louisiana Superdome

January 21, 1983

6:30 P.M.

Thank you.

Dr. Miller, Mr. Secretary General, Dr. Clayton, Distinguished Participants in this teleconference, Ladies and Gentlemen, our purpose here this evening is to listen to the ideas of distinguished participants speaking to us from throughout the world. We are all anxious to hear them.

I would like to speak of my own country, the United States of America, and of my own experience. While we represent many nations here tonight, people of different cultures, religions, races, traditions, and languages... the mutuality of our needs and our interests is far greater than our differences. Virtually all human experience confirms that the well being of each nation, each people, is closely related to the well being of each of us.

The pioneering people who formed my country learned that lesson well, especially, of cooperation, of helping one's neighbors, and of being helped by them. The clearing of the land, the raising of houses, the gathering of crops, the education of the young... in all of these experiences and many more we learned the benefits - indeed the necessity -- of sharing experiences and cooperating with one's neighbors.

President Reagan has called for our people to help one another and renew the great spirit of America in all of our lives. We know now that in this world we live in, we are all neighbors.

The diversity of participation here this evening, I believe, is evidence of my country's belief in that reality. I am pleased to be here representing that belief. And I am pleased at this opportunity to share, with all of you, our concern and our mutual experience.

As the U.S. delegate to the Center for Research and Innovation, we have worked with countries of the Organization for Economic Cooperation and Development in assessing the status of technology in education in various parts of the world. Also, through the National Institute for Education we are participating in surveying education through technology in a UNESCO project.

Since the Reagan Administration has turned over more responsibility to local and state school authorities from the Federal government we have seen an increase in the uses of technology in education. Working with the partnership of private development and public educators, great strides are being made in the uses of microcomputers. One promising example of such cooperation can be seen on the floor of this exhibit area - in the Louisiana Superdome - where educational professionals and private enterprise have come together to exchange ideas and information.

I wish to thank you for the opportunity and the privilege of being here with you this evening on behalf of the U.S. Department of Education and the Office of Educational Research and Improvement. And I wish to assure you that there is no field more dependent upon the sharing of ideas and experience than the field of education. That sharing is central to the concept of education itself.

Thank you.

"Educational Forcasts for the Eighties"

by
Dr. Donald J. Senese
Assistant Secretary for Educational
Research and Improvement
U.S. Education Department

Delivered for
Project HOST Mini-Session
Vancouver, Washington

February 17, 1983

"EDUCATIONAL FORECAST FOR THE EIGHTIES"

It is always difficult to make exact predictions for future years in any field, but I believe we can identify some trends.

I believe we will find an emphasis on quality and excellence in education as contrasted to the overemphasis we had on equity issues or access to education of the 1960's and 1970's.

We will witness more discussion on science and math as well as technology in education as part of this emphasis on quality and excellence in education. The President made reference to upgrading math and science instruction through a block grant proposal in his State of the Union message.

There will be efforts in Congress to launch a major federal support program for math and science, and possibly foreign language education. The President's emphasis, which I feel will prevail, will be a more limited emphasis on closing gaps and assisting States and localities with leadership roles.

We shall find a growing emphasis on technology especially as we witness the fall in prices for educational technology and we realize additional uses for technology. Technology will be viewed increasingly as a device to enhance student learning and increase teacher productivity.

We will find a growing interest in the role of private education especially focused on the issue of tuition tax credits. This Administration does not see itself as a defender of a monopolistic public system, but that all students as well as the nation will benefit from healthy public and private education sectors.

There will be a renewed focus on assistance for students in college with an emphasis on individual self-help. The explosion of college aid programs has led to the impression that the federal government should guarantee every student, regardless of family income, a place in college. A recent survey by the National Center for Education Statistics revealed that sixty-two percent of families had made no provisions for savings for college education for their children. The Education Savings Accounts, proposed by the President, will give middle and lower income families an incentive to save for their children's college education. In addition, it will also encourage a real increase in savings for economic growth. There should be a focus on self-help as well as government help in meeting education expenses.

I would like to note that the Administration's successful effort to bring down inflation and interest rates has resulted in a savings of over one billion dollars in the student loan program over the past fifteen months. This decreased program cost resulted from a decline in the special allowance or interest rates the Department pays private lenders under the Guaranteed Student Loan (GSL) and PLUS Auxiliary Loan Programs. From September 30, 1981 to December 31, 1982, the rates dropped from 12.5 percent to 4.75 percent. Had rates stayed at the 12.5 percent level, a total of $1.2 billion would have been required to meet GSL and PLUS program costs.

Finally, I believe we are going to see a greater emphasis on State and local control as well as individual choice in education.

In 1 81, almost thirty education programs were turned back to the States in the Education Consolidation and Improvement Act. States and localities, not federal officials gain the final say in allocation of money to a variety of program areas. The Administration wishes to encourage this movement with its recent proposal to turn adult and vocational education programs into block grants.

Choice in education is being encouraged not only by the tuition tax credit proposal, but the option voucher plan for Title I recipients.

State and local educators in the eighties will have more opportunities and more responsibilities in making decisions on the conduct and improvement of American education.

Donald J. Senese

"Educating for Excellence in a Technological Age"

by

Dr. Donald J. Senese
Assistant Secretary for
Educational Research and Improvement

Christopher Newport College
Newport News, Virginia

March 4, 1983

Good Afternoon.

It is a real pleasure to be here with all of you today in the beautiful and historic Newport News area and at one of the outstanding educational institutions in the Commonwealth of Virginia--Christopher Newport College.

When we look at the defense of the United States, we must look to this area which has such a critical role--a key area protecting our Atlantic coast, and the home of the ship building industry on which we depend for such vital construction as our aircraft carriers.

Within the midst of this strategic location, I must also express my pleasure at the invitation from Christopher Newport College. While the Commonwealth of Virginia has many old and venerable and excellent institutions of higher education, Christopher Newport College has come to the forefront of educational excellence within two decades. Yours is an urban institution not only serving the traditional student but providing great services to the non-traditional student. Your institution represents the view that education has no career or age boundaries; you cater to all those who wish to learn.

I am especially pleased to see my former colleague from my teaching days, Dr. Bob Hermann, head of your Psychology Department. Bob is an excellent educator and you are fortunate to have him as a member of your faculty.

You are fortunate to have as a Member of the U.S. House of Representatives from this area a real friend of quality education, Congressman Herb Bateman. I have known the Congressman for many years and know he will provide for this area in Congress the same type of dedicated service he provided for many years as a Member of the Virginia Senate.

I would like to discuss with you today some of the work and important initiatives which represent the current focus within the U.S. Department of Education, especially the Office of Educational Research and Improvement. Of major impact to all aspects and on all levels of education are the new developments in technology.

Our country, indeed, all developed nations of the world, are undergoing a shift from operating as an industrial economy to becoming an information-service economy. The technological revolution is not in the future---it is now. From videogames to the microcomputer to additional uses of the silicon chip, technology is changing our way of life.

Technology and its applications to education are a major policy concern of the U.S. Department of Education. On June 22, 1982, at a national tele-conference held in Washington, D.C., U.S. Secretary of Education Terrel H. Bell said:

> The growing computer industry has been a major cause of the increased demand for individuals with basic and higher level skills, particularly in the related fields of math and science. We should assist school districts to explore uses of technology to improve skill instruction, to prepare for employment, and to increase the productivity of teaching.

Dealing with technology is one of the most significant challenges educators have faced in modern times. It is important for on those of us who are in the field of education to at least look at the technology available to use today, and to consider the even more sophisticated technology that is rapidly becoming available.

We must deal with the impact that technology will have upon the generation of students now in school. These children and young people will be the first generation to live out their adult lives in what is now being referred to as "the information age." How we act upon this knowledge, and

prepare today's students for this inevitability, will determine their ability to cope with the world at hand as well as our nation's ability to maintain its status among nations.

Education is the key to dealing with technology. We cannot ignore the developments we see around us. As educators we can not allow the complexity of the situation to overwhelm us into indifference.

The Office of Educational Research and Improvement has been given the lead role in implementing Secretary Bell's initiative in educational technology; we have been working with other offices in the U.S. Education Department to identify uses and the potential of technology to improve education.

OERI sponsored a conference in Pittsburgh this past November bringing together over forty experts whose task was to identify the key research issues for computers in the fields of math, science, reading, and writing. I believe the final report will be of tremendous help to educators.

Several of OERI's components have been very active in a variety of projects and programs directly related to work with educational technology. Among them the Office of Libraries and Learning Technologies, the National Center for Education Statistics, and the National Diffusion Network.

The Office of Libraries and Learning Technologies is working with state and local educators to assist them in identifying the issues and opportunities in instructional technology. Our Office of Libraries and Learning Technologies is also working with the U.S. Education Department's Regional Offices to assist dissemination projects in technology and to provide opportunities for teacher training in computer literacy.

Presently, the National Center for Education Statistics, is holding meetings of experts to examine the whole question of computer literacy.

The National Diffusion Network has been active in identifying outstanding programs in technology which would be beneficial to school districts throughout our country. They have established "Lighthouse Schools" in an attempt to focus on outstanding applications of technology to classroom and educational needs. The Lighthouses are hosting visitors from all over the country and providing material on their adaptations of technology to individual school use. We have received a great response from these programs. I have had the opportunity to personally visit four of the five Lighthouses currently in operation and I have been impressed with the effectiveness each has displayed with its particular use of technology. Some of the applications include:

- o a computer assisted instruction program developed to assist in the improvement of basic skills instruction for compensatory education populations.
- o a regional alternative occupation education program in high technology for secondary school age youth, some of whom were previous school dropouts.
- o computer assisted instruction for secondary mathematics courses.

Indeed, education for a technology era is an important priority, however, it is not our only focus. In fact, we cannot look at technology alone. We must consider it in relation to other problems and facts of education, particularly the quality and excellence of education.

A few years back, critics viewing problems in education posed the question 'Why Can't Johnny Read?' Professor Eric Zom updated the education crisis in an article in the Chicago Tribune (August 12, 1981) when he related this problem to the technology age. His article was entitled "If Johnny Can't Read, How Will He Plug In To The Electronic World?" He said:

> You can call him Johnny: long-suffering mascot of national illiteracy; standard bearer of our collective disgrace; blot on Western culture.
>
> He still can't read very well, his writing is getting worse, and he's about to be victimized by one of the most dramatic undertakings in the history of civilization: the Information Revolution, a watershed in human development to compare with the Industrial Revolution 150 years ago and the invention of the printing press in 1440.
>
> During the projected Information Revolution of the next 20 years, Johnny will be overrun by those marching to the muted, staccato drumbeats of clicking electronic keyboards.
>
> The common person supposedly will have access to the equivalent of 10,000 mental slaves. Money will be made and business conducted by buying, selling, and trafficking in information and its complicated delivery systems.
>
> The already evident truth will become more obvious: Power, for individuals and nations, is knowledge.
>
> Where will that leave Johnny, the person who does not have a functional ability to read or write any language?
>
> He will find that there are fewer jobs for unskilled workers. His world will be highly complex and interconnected, and daily life will demand control of sophisticated cable and computer technology; he will be unable to take advantage of this vast technology with his so-so-skills.
>
> Self-styled experts will speculate endlessly "Why Johnny Can't Log On."

His prognosis is an apt one. No matter what other programs or initiatives we might attempt to implement in the educational arena we must not ignore basic education. Without a concern for a conscious attempt to have excellence in education, other efforts will be futile.

U.S. schools are doing an impressive job of educating many students from a variety of economic and ethnic backgrounds; we are doing great in quantity but not very well in quality. As that great scholar of the American educa-

tional system Dr. Russell Kirk has noted: "A great many are schooled; very few are educated."

In his State of the Union address this year, President Ronald Reagan focused on this very issue. In urging a widening of our education horizons, the President stated:

> We Americans are still the world's technological leader in most fields. We must keep that edge, and to do so we need to begin renewing the basics -- starting with our educational system. While we grew complacent, others have acted. Japan, with a population only about half the size of ours, graduates from its universities more engineers than we do. If a child does not receive adequate math and science teaching by the age of 16, he or she has lost the chance to be a scientist or engineer.
>
> We must join together -- parents, teachers, grassroots groups, organized labor, and the business community -- to revitalize American education by setting a standard of excellence.

In examining the question of excellence, one might ask just what comprises excellence in education. And, to be sure, that is not an easy question to answer. The phrase itself is simple enough. But the implications which it holds for educators who are attempting to deal with modern day problems of education indicate a highly complex problem.

Over the past decade or two, many people, both within and outside the educational community, have come to question the quality of the education being provided by most of our schools. And, their concerns are not without foundation. Unfortunately, certain factors indicate that the education being offered to most young people is not what it should be.

Employers are expressing disappointment with the secondary school, and even college, graduates who are now or have recently entered the workforce. A high percentage of these recent graduates have not mastered even the basic skills. Many have difficulty with spelling, use of correct grammar, and simple mathematical computations. Many could be defined as functional

illiterates. Whatever title we might designate for these unfortunate individuals is unimportant, the fact is that individuals who lack the basic competencies do not form the basis of a trainable, appropriate workforce needed by business and industry to meet our nation's goals.

The problems experienced by such persons are tragic for them on a human level to say nothing of the dangerous position in which it places our nation.

The success of our educational system is intimately tied to our national security. For the past decade, Scholastic Aptitude Test scores have shown a decline. Last year for the first time since the decline began, there was a very slight upturn. A number of individuals would like to believe that the scores have bottomed out, that improvement is already here. Hopefully, such an assessment is correct. But whether or not the upturn is just a one time improvement or the beginning of a definite turn around that will show increases in future years as well, the low level which these scores have reached nationwide indicate a long uphill battle to really signify any real improvement in the schools.

It has taken some courage to acknowledge and confront the fact that something is wrong with our schools. Most of us have always accepted, without question, that our nation's schools were engaged in the business of education. We assumed that students were being taught, in a superior fashion, reading, writing, and arithmetic with proper doses of history and other academic disciplines part of a rigorous curriculum.

Given the opportunity, most young people want to learn, their education should be a rewarding experience. Every single student enrolled in school should have the opportunity to receive an excellent education, one which provides them further education, gainful employment, and a fulfilling life-style.

Recognizing the importance of education, and concerned about its current direction, the Reagan Administration has given a return to excellence a high priority.

A major difficulty in attempting to remedy current problems in the schools is that of understanding just what it is that the schools aren't doing. Why are they failing? What is wrong with the educational programs that they offer?

In order to do this, and consequently improve the educational atmosphere within such schools, we need to identify what it is that constitutes an effective school. There are such schools. There are schools which go beyond the average in motivating and academically preparing their students.

The National Institute of Education, a component of OERI, has been engaged in looking at what is needed in order to improve the instructional effectiveness of schools. While there are many and varied characteristics of schools which display a consistent degree of instructional effectiveness there appear to be some bottomline characteristics which run as a common thread throughout these schools: For example:

- o strong administrative leadership by the school principal;
- o teacher expectations that students can reach high levels of achievement, regardless of pupil background;
- o school-wide emphasis on basic skills.

One would think that all schools should possess such characteristics. Apparently some, in fact many, don't. Perhaps, also, there are other ingredients or combinations of ingredients which make a school "work" ----a school that is able to provide the type of educational atmosphere in which students succeed year after year.

Perhaps by identifying these schools and by giving some exposure to their programs, other schools could benefit. Effective schools seem to be the exception rather than the standard. This needs to be changed. School officials need to be exposed to successful schools, the programs that they offer, and the way in which they offer them. This would enable other schools and school districts to replicate successful programs if they met a particular school system's needs. It could also enable colleges and universities to better adapt their coursework and programs for the secondary graduates who will be attending their institutions of higher learning. With better prepared secondary students, college coursework can be improved.

As part of a program to identify schools which have programs that could be identified as excellent, Secretary of Education Bell is implementing a program to acknowledge outstanding public secondary schools throughout the country. A separate program will be initiated for recognition of outstanding private schools.

Fifteen-member panels of experts in the field of education, made up of individuals not affiliated with the Federal government, will review nominees for recognition of their school programs. Public high schools, as well as middle and junior high schools, will be nominated by each state's chief school officer.

The attributes for an effective school which will be judged by the panel include: clear academic and behavior goals; order and discipline; high expectations for students; teacher efficacy; rewards and incentives for teachers and students; positive school environment; administrative leadership; community support; extent of concentration on academic learning

time; frequent and monitored homework; regular and frequent monitoring of student progress; well-coordinated curriculum; variety of teaching strategies; and opportunities for student responsibility.

Those selected by the panel will receive public recognition. They will be awarded a plaque in honor of their outstanding achievement or achievements.

It is hoped that national attention will be focused on some of the good qualities of some of the public schools throughout the nation. While it is understood that not everyone will agree on the qualities that cause one school to be better than another, attempting to look at the question is a step in the right direction.

If we can focus attention on what is right with American education, perhaps it will have positive ramifications. In introducing this program, Secretary Bell said:

> ...if we also spark a little debate or controversy over the qualities that make a school stand out above the others, so much the better...

Also very much concerned with the issue of what makes a good school is the Secretary's National Commission on Excellence in Education. Hard at work for over a year, their work will be completed by the end of March. The Commission is providing what is probably one of the most comprehensive, intensive looks at education, throughout the country, that has ever been done.

It would be against the policies of the Reagan administration which strongly supports each state's authority to operate and administer its own school system, for the Commission to attempt to set any type of National

standards. It will not. What it will do, as charged by Secretary Bell, is to make "practical recommendations for action" to public officials, educators, parents, and others who set school policies.

Usually it is the students in the schools who take the tests--today, I believe that we, the educators, are also being tested. Can we turn things around? Can our schools once again provide an outstanding example to the rest of the world of the highest standards of educational principles and practices? With our shift in emphasis to excellence, I believe that we have started down the road to achieving that goal. Let us not get stuck along the way but move full speed ahead. We will all benefit from the results.

There is an important role for institutions like Christopher Newport College. We need to go beyond the stage where elementary and secondary schools blame colleges for lowering admission standards and the college claim that has only done so in response to the poor academic products being turned out by our elementary and secondary schools.

We all have an interest in a strong educational system. This Administration has continued student aid programs seeking only to target them more carefully to the students who need funds. Yet, there is also an emphasis on an important American trait and quality -- self-help. The Administration's Education Savings Account plan is designed to help parents save for the college education of their child or children. It will also have the effect of assisting our economy by adding to the pool of savings for our nation. We need to increase this pool if we are to meet the economic challenges of investment for future prosperity.

While we encourage students to attend college, we must guarantee that this education must be worth something. As I mentioned earlier, we have entered an age of technology. We must be willing to use this important tool

at all levels to improve student learning, increase teacher productivity, and develop more effective schools. We must be able to reach out to the traditional and non-traditional student to prepare them for the great challenges of tomorrow.

We are entering a period in our history--especially through the block grant proposals of the Education Consolidation and Improvement Act--which gives State and local educators a greater voice in decision-making. Colleges and universities can play a crucial role in assisting and preparing educators to make the correct decisions and exercise new responsibilities.

It has been a pleasure to be with you today and I wish Christopher Newport College well as it persues the goals of educational excellence and quality.

"Getting Started With the New Technology"

by
Dr. Donald J. Senese
Assistant Secretary for Educational
Research and Improvement
U.S. Education Department

Delivered for
Horace Mann Seminar
Washington, D.C.

March 16, 1983

OPENING REMARKS FOR DR. DONALD SENESE FOR MARCH 16, 1983

HORACE MANN SEMINAR: GETTING STARTED WITH THE NEW TECHNOLOGY

SECRETARY BELL'S TECHNOLOGY INITIATIVE IS FOUNDED ON THE PRINCIPLE OF THE NEW FEDERALISM. IT IS OUR BELIEF THAT INDIVIDUAL STATE AND LOCAL EDUCATION AGENCIES HAVE THE PREROGATIVE AND RESPONSIBILITY TO ESTABLISH EDUCATIONAL GOALS AND PROGRAMS. AS SUCH, THE DEPARTMENT DOES NOT OFFER SPECIFIC CURRICULUM NOR STANDARDS CONCERNING TECHNOLOGY, OR FOR THAT MATTER ANY SUBJECT.

THE DEPARTMENT IS PROVIDING LEADERSHIP AND INFORMATION TO ASSIST EDUCATIONAL LEADERS TO EVALUATE THEIR NEEDS AND ESTABLISH THEIR OWN POLICY AND PROGRAMS. TO THIS END, WE ARE WORKING THROUGH PROJECT BEST TO PROVIDE INFORMATION ON TECHNOLOGY AND ITS APPLICATIONS TO EDUCATION. WE BELIEVE THAT MODELING THE USE OF TECHNOLOGY IS THE MOST EFFECTIVE MANNER TO DEMONSTRATE WHAT IT CAN AND CAN NOT DO. THEREFORE, ONE OF THE MAIN OBJECTIVES OF PROJECT BEST IS TO DEMONSTRATE THE USES OF TELECOMMUNICATIONS IN SHARING INFORMATION AMONG AND BETWEEN THE STATES. THESE PROJECT BEST NATIONAL TELECONFERENCES DEMONSTRATE A RANGE OF FORMATS AND APPROACHES.

AT THE RECENT COMTEX CONFERENCE IN NEW ORLEANS I PARTICIPATED IN AN 8 NATION AUDIO CONFERENCE, WHICH WAS EFFECTIVE AND COST BENEFICIAL. ON THE OTHER HAND TODAY'S FOCUS ON TEACHERS AND ADMINISTRATORS GETTING STARTED WITH COMPUTERS IS ENHANCED BY VIDEO CONFERENCING. TELEVISED SEGMENTS ALSO FACILITATE THE DEMONSTRATION OF TEACHING TECHNIQUES AND/OR STUDENT INTERACTION.

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PROJECT BEST'S UNDERLYING PRINCIPLES ARE:

- IT IS THE STATE AND LOCAL EDUCATION AGENCIES THAT ARE RESPONSIBLE FOR THE EDUCATION OF THE CHILDREN UNDER THEIR JURISDICTION.

- THE DIRECTION FOR APPLICATIONS OF TECHNOLOGY IN EDUCATION MUST COME FROM REAL NEEDS AS DETERMINED AT THE LOCAL AND STATE LEVEL.

- LOCAL PROGRAMS MUST INCLUDE THE COMMUNITY, THAT IS SCHOOL BOARD MEMBERS, PARENTS, AND THE GENERAL PUBLIC IN FORMULATING AND USING TECHNOLOGY IN THEIR CLASSROOMS.

- THERE ARE ECONOMIES OF SCALE IN TECHNOLOGY THAT REQUIRE JOINT EFFORTS

I WOULD LIKE TO TALK FOR FEW MINUTES ABOUT THE PROCESS USED IN DEVELOPING PROJECT BEST. ALL STATES WERE ASKED TO PARTICIPATE. ORIGINALLY, IT WAS ANTICIPATED THAT NO MORE THAN 20 STATES WOULD TAKE PART IN THE PROJECT. HOWEVER, THE TIME WAS RIGHT AND MORE THAN 40 STATES CHOSE TO PARTICIPATE AND AGREED TO COMMIT TIME, PERSONNEL, AND FUNDS. THE STATES WERE CHOSEN AS THE LOGICAL UNIT BETWEEN THE NATIONAL GOVERNMENT AND THE LOCAL EDUCATIONAL COMMUNITY SINCE ULTIMATELY THE CONSTITUTIONAL AUTHORITY FOR EDUCATION RESTS WITH THE STATES. EACH OF THE PARTICIPATING STATES

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DEVELOPED PROGRAM PLANS TO MEET THEIR NEEDS AND BUILD ON BASIC SKILLS AND TECHNOLOGY PROGRAMS ALREADY UNDERWAY. SOME STATES HAVE INVOLVED THE PRIVATE SECTOR, INSTITUTIONS OF HIGHER EDUCATION, LOCAL SCHOOLS, PARENTS AND THE GENERAL PUBLIC IN THEIR PLANS AND ACTIVITIES. SOME STATES ARE IMPLEMENTING STATE-WIDE PROGRAMS AND OTHERS ARE DEVELOPING LOCAL SCHOOL PROGRAMS. THIS WE BELIEVE IS IN THE BEST SPIRIT OF THE NEW FEDERALISM IN THAT THE STATES ARE DETERMINING THEIR OUR NEEDS AND THEIR OWN DIRECTION.

PROJECT BEST HAS DEVELOPED A VARIETY OF RESOURCE MATERIALS THAT ARE BEING USED BY THE STATES TO PROVIDE INFORMATION ON THE USES OF TECHNOLOGY IN EDUCATION. AS A PART OF EACH TELECONFERENCE, VIDEO CASSETTES OF PORTIONS OF THE CONFERENCE HAVE BEEN MADE AVAILABLE TO THE STATES FOR EXTENDED USE. PRINT MATERIALS ON PRIORITY ISSUES RAISED BY THE STATES, HAVE ALSO BEEN DEVELOPED. THE ELECTRONIC MAILBOX SYSTEM, BEST NET, IS USED TO SHARE CURRENT INFORMATION AND FIND ANSWERS TO PROBLEMS AND ISSUES OF CONCERN AMONG AND BETWEEN THE STATES.

THE REGIONAL OFFICES ARE ALSO PARTICIPATING IN THE IMPLEMENTATION OF PROJECT BEST AND IN TECHNOLOGY STAFF DEVELOPMENT EFFORTS WITH OERI AND THE HORACE MANN LEARNING CENTER. WE ARE PLEASED TO SPONSOR THIS PROGRAM JOINTLY WITH THE HORACE MANN LEARNING CENTER. LAST MARCH, OERI AND THE HORACE MANN CENTER PROVIDED AN EXCITING SERIES OF WORKSHOPS ON TECHNOLOGY FOR DEPARTMENT PERSONNEL. 16 OF THESE SESSIONS WERE VIDEOTAPED AND MADE AVAILABLE TO THE REGIONAL OFFICES. WE KNOW THESE TAPES HAVE BEEN

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USEFUL. FOR EXAMPLES, THE CHICAGO OFFICE, UNDER THE LEADERSHIP OF ROBERT HEWLETT, HAS DUPLICATED THESE TAPES MORE THAN 150 TIMES FOR USE BY SCHOOLS, PBS STATIONS, AND OTHER INTERESTED ORGANIZATIONS. IN ADDITION, THROUGH OLLT, OERI IS FUNDING REGIONAL ACTIVITIES THAT SUPPORT THE SECRETARY'S TECHNOLOGY INITIATIVE. THESE ACTIVITIES WILL FOCUS ON THE TRAINING OF TEACHERS IN COMPUTER LITERACY AND USES OF TECHNOLOGY FOR LEARNING.

I AM SURE THAT THIS MORNING WILL BE INFORMATIVE TO YOU. OERI, AND ITS TECHNOLOGY DIVISION IS EAGER TO ASSIST THE DEPARTMENT IN INCREASING EFFECTIVE USES OF TECHNOLOGY IN ALL PROGRAM AREAS. WE ARE DELIGHTED TO HAVE YOU HERE AND WE LOOK FORWARD TO FUTURE COLLABORATIVE EFFORTS.

IN CLOSING, I WOULD LIKE TO MENTION THAT TECHNOLOGY IS A REAL PART OF OUR STUDENTS' DAILY LIVES. TELEVISION, RADIO, TELEPHONES, VIDEO GAMES, SINGLE PURPOSE COMPUTERS AND MICROCOMPUTERS ARE A REALITY IN THE HOME AND IN THE BUSINESS WORLD. THE CHALLENGE TO EDUCATORS IS HOW THEY WILL BE USED IN SCHOOLS. PROJECT BEST IS STRIVING TO BRING INFORMATION AND EXPERIENCES TOGETHER TO ASSIST EDUCATORS AS THEY ASK THE HARD QUESTIONS, DETERMINE THE REAL WORTH OF TECHNOLOGY AND MAKE RATIONAL DECISIONS CONCERNING ITS USES IN THE SCHOOLS.

Prepared by Drs. Frank Withrow and Linda Roberts
March 8, 1983

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"Trends and Predictions in Educational Technology"

by

Dr. Donald J. Senese
Assistant Secretary for Educational
Research and Improvement
U.S. Education Department

Keynote Address for
Conference on Technology - "Focus on the Future"

William Rainey Harper College
Palatine, Illinois
April 6, 1983

Good Morning.

It is a pleasure to be back in Illinois and to be speaking before this very impressive conference on a topic of vital national concern, "Trends and Predictions in Educational Technology."

One needs only to review the major newspapers to realize the significance of the computer age. The lead story in the recent (March 30, 1983) Chronicle of Higher Education was "Colleges Struggling to Cope with Computer Age." The New York Times (March 27, 1983) had a special supplement on high technology featuring stories on "Computer Lore Lands Top Jobs" and "Engineers: A Dropout Problem for the U.S." And last week (April 1, 1983) The Washington Post had a featured front page story entitled "U.S. Spurs Computer Supremacy: Defense Project Calls for Lead by 1990s Over Japan." The Wall Street Journal featured two stories (April 4, 1983): "High-Tech Track; Struggling Industries in Nation's Heartland Speed Up Automation" and "Japan Trying Hard to Take Lead from U.S. in 'Intelligent' Computeres." And I know your own local Chicago Tribune features a regular section on new technology in its business pages.

Throughout the course of history there have been events and developments which have been so significant in their impact that they have brought lasting change to the world. We live in such an era. Advanced developments in the field of technology and computer usage are placing us on the threshold of what is now being referred to as the "information age." The business leaders and educators of our society who will determine the direction of our society in such an age are now forging the legacy that we will pass on to future generations. How we deal with the new technologies before us will determine in years to come who we are and what will be our place among nations.

We could try to ignore the reality of the situation before us. Many of our generation are uncomfortable with the notion of what the new technology portends. Many think that if they ignore it the computer will go away.

Young people, already, appear to be much more attuned to using the computer at all levels of its development. Witness the popularity of game arcades. Look at how quickly video games have displaced the old favorite, the pinball machine. Children are growing up with not only bicycles and rollerskating but Pac Man, Ms. Pac Man, and Super Pac Man. Young people in schools in almost all instances approach computer learning, when given the chance, with interest and enthusiasm. Even previously disaffected youth have found a new meaning to schooling when the computer becomes a part of their learning program. It has inspired many students to take another look at learning and decide it can be fun as well as useful.

We should not turn our backs on the students now in school, and those young people who will soon be entering the workforce, by pretending the computer does not exist. For, indeed it does, and it is creating a development properly called a revolution. The way we live, work, and play will all be affected. How we react to and deal with this reality will determine not only the future of students now in school but the legacy that we will provide to future generations.

You, the individuals who make up the audience here today--the academic teachers, vocational and technical teachers, school administrators, college personnel, business and industry leaders -- are all a part of the leadership that can make the difference. You are in a position to develop and implement programs that can determine how we meet the challenge.

Other advanced nations are moving rapidly into the world of technology. They are imposing rigid and demanding curriculum on their youth; they are intent on preparing them for their part in a workforce geared to a high tech society. Technological studies are an integral part of the school curriculum in Japan, Germany, and the Soviet Union -- all countries which have been cited as focusing heavy on education with their students producing impressive achievements. These countries, however, all operate under a centralized system--their schools are controlled by their national units of government.

Our schools operate differently. Under the educational system in the United States, the operation of the schools is by local education agencies operating under the authority of the individual state governments. This is as it should be. It is a concept which the Reagan Administration strongly supports and which has served us well throughout our history. It provides for diversity and creativity at the local level while allowing a great amount of individual citizen input.

While the U.S. Department of Education is interested in the role computer technology plays in the educational arena, it will not get involved in dictating educational policy or curriculum to the States or local school districts.

However, although the role of the federal government is a limited one, there is a non-intrusive federal leadership role which is important. The Reagan Administration, under the New Federalism, is trying to stimulate an atmosphere which encourages schools to get involved with instructional technology, to share information on technology, and to get the private sector more involved in instructional technology.

There are no plans to return to the type of programs offered in the 1960s in which large sums of federal dollars were spent on a wide range of educational projects with questionable results.

We are entering not only a new age in technology but a new age in educational responsibility and decision-making. For example, the Education Consolidation and Improvement Act (ECIA) or block grant approach has been turning decision-making authority and finances back to the States and local school authorities. The purpose of the block grants has been to reduce federal control while enhancing the decision-making process at the State and local levels.

Therefore, there is now more responsibility on State and local school officials to become aware of the advantages of instructional technology and how it can best be adjusted to local needs. They have the resources and decision-making power to do something about it. Most interesting are the results of a new survey conducted by the American Association of School Administrators (AASA) which finds that the nation's school districts are placing a high priority on technology. The number one use of money from the block grant funds went to the purchase of books. The second largest expenditure was for computer equipment.

When the block grant proposal was adopted, very few, if any, could perceive this use of the funds. However, once the funds and decision-making authority were put into the hands of local people, they were quick to respond to a real need--preparation of students for the technological age.

Very few districts have, however, used their block grant dollars to train teachers in how to utilize the equipment which has been purchased. This highlights one of the major problems of schools in attempting to teach computer usage to students--there are very few teachers who are computer literate.

Actually defining computer literacy is in itself difficult; laymen as well as experts have yet to agree on a definition. In its present context it could be used for anything from pushing a few buttons to doing programming. One of the components of the Office of Educational Research and Improvement, the National Center for Education Statistics, is holding meetings of experts to examine the whole question of what is computer literacy and what constitutes competency in computer literacy. Suffice it to say, however, a teacher with no knowledge about computers and their usage is not going to be able to effectively utilize the technology offered by the computer in any educational program. The teacher will approach the computer with fear and trepidation, not confidence and creativity. We will have difficulty expecting a pre-Gutenberg trained faculty to deal with a post-Gutenberg world of technology.

To assist in alleviating this problem, the Office of Educational Research and Improvement through our Office of Libraries and Learning Technologies implemented a program in which it will distribute a total of $100,000---$10,000 to each of its 10 regional offices. The money will be used for programs directly related to improving teachers' skills and knowledge about the use of computers and technology in the classroom. These funds will be utilized as local needs dictate but with the purpose of assisting computer literacy for teachers.

The U.S. Department of Education can offer information and limited but targeted assistance for states and localities as they make the choice as to the priority level that technology will have within their individual educational programs.

At a National Teleconference on Educational Technology held on June 22, 1982, in Washington, D.C., Secretary Bell announced that technology would be one of his major initiatives in education. There were over forty-five state sites, including the one in D.C., that participated in two days of activities highlighting technology in education.

The Office of Educational Research and Improvement was selected by the Secretary to take the lead in implementing his initiative on technology. OERI has become involved with a number of interesting and exciting educational programs.

Our Office of Libraries and Learning Technologies is monitoring several contracts which utilize technology to improve the teaching of the basic skills. One of these is a communication program known as Project Quill. It uses a set of microcomputer-based programs around which several instructional activities have been developed. The activities are geared to young writers in grades 3 to 6. Quill utilizes the microcomputer's technological capabilities to help teachers teach writing. The youngster's natural enthusiasm for anything connected with the computer strongly motivates them to write and to perform the various tasks which are a part of the program. It has helped to eliminate the drudgery of rewriting compositions by hand. Corrections and rewrites can be made quickly on the word processor and a print-out secured.

A second project is in the field of mathematics. It is being designed by faculty at the Ohio State University. After reviewing existing programs using technology, they will develop and demonstrate a new curriculum and methodology designed to improve learning for the average student in the elementary grades which will have appropriate applications for handicapped, gifted, and culturally diverse children.

A reading project, directed toward the same population, will be designed by WICAT, Inc. of Orem, Utah.

The National Diffusion Network operates under the auspices of the Office of Educational Research and Improvement. Through the N.D.N. model educational programs which contribute to academic excellence are selected to receive funding for purposes of dissemination of information to other school districts throughout the country.

For example, an excellent program might exist in a school district in Illinois. It might be ideal for helping to solve an existing education problem in Massachusetts or Oregon, or California or Florida but how are teachers and administrators in those states going to be made aware of the program? The option of whether or not to adopt a particular program is, of course, at the discretion of local school officials.

As a result of the current emphasis on technology, the National Diffusion Network has awarded grants to five Lighthouse Projects in Technology. The Lighthouse Projects are designated as such because they are using technology to enhance education in an outstanding way. The Federal grants will enable those schools to host visitors from all over the country and to provide material on their adaptations of technology to school use.

The response, so far, to these programs has been very positive. I have had the opportunity to personally visit four of the five Lighthouses currently in operation and I have been impressed with the effectiveness each has displayed with its particular use of technology. Some of the applications include:

- o a computer assisted instruction program developed to assist in the improvement of basic skills instruction for compensatory education students.
- o computer assisted instruction for secondary mathematics courses.
- o a regional alternative occupation education program in high technology for secondary school age youth, some of whom were previous school dropouts.
- o a program utilizing computers to improve reading and math skills and for the management of student records with cross-referencing information about prescriptive instructional materials that can help address skill deficiencies.

Coincidential to and perhaps as a result of the computer revolution and the impact that computers are having on the schools, there has developed many very positive business/industry partnerships with the schools. This is a healthy trend which has found business responding in a favorable way to the needs of the schools.

President Reagan has been encouraging such partnerships. In his Radio Address to the Nation made from Camp David on March 12, 1983, he stated:

> Private sector initiatives can also make great contributions. We're encouraging corporations, community organizations and neighborhood groups across the country to adopt schools and help them meet their education needs with funds, equipment and personnel.

There are already some examples of how business and industry are helping in a positive way to assist the schools, especially in the area of technology. Allow me to mention some specific examples:

- The Digital Equipment Corporation located in Massachusetts has been instrumental in the implementation and operation of Oxford, Massachusetts Public School System's Project C.O.F.F.E.E. Project C.O.F.F.E.E. which stands for the Cooperative Federation for Educational Experiences is an alternative occupation education program for alienated secondary school students. Its program consists of four components for each student basic skills instruction, occupational training, counselling, and physical education. Digital has contributed both equipment, and manpower time to this project. A computer center with both hardware and software has been contributed by Digital. It is in this computer center that many of the students receive the training in data processing which prepares them for entry-level positions in the computer field.

  Teachers in the Project C.O.F.F.E.E. program receive training in electronic assembly as Digital's Westfield plant and in computers at Educational Services in Bedford, Massachusetts. This partnership has gone a long way in providing Digital and other corporations and companies with a pool of individuals trained in the basic skills from which they can hire.

  In another program Digital donated a bus to the schools of one county and outfitted it with donated Digital Corporation equipment. Twenty four junior high schools will participate in a three year

program which allows each school a one month use of the bus. As part of the program, three teachers in each school will be trained in the rudiments of computer programming and the principles of teaching and utilizing computer skills in the classroom. When the bus leaves a school, Digital will then give them five "robbins," desk top micro-computers, free of charge.

Recognized as an outstanding school/industry partnership, the Oxford School District and Digital received a presidential commendation from President Reagan's Task Force on Private Sector Initiatives in October of 1982.

Starting next fall, schools in three states will be offering courses which utilize computers and software which has been donated to them by International Business Machines Corporation as part of an $8 million dollar effort to enhance computer literacy in schools at the secondary level.

IBM will donate equipment to 84 secondary schools in these three states including both public and private schools, as well as four teacher training institutions.

This "Computer Literacy Model Program" is designed to improve the knowledge about and use of computers by both students and teachers.

Just last month the Tandy Corporation/Radio Shack introduced an innovative program which offers free training in computer use for elementary and secondary school teachers throughout the United States.

Over the past few years Radio Shack has been offering free classes in computer education to more than 125,000 teachers. The success of that program led them to adopt their current, more widespread effort to assist educators in being able to learn about computers.

A package called America's Educational Challenge has been sent to the principals and headmasters of over 103,455 schools in the United States. Each package included:

- o an educator's handbook describing how microcomputers are used in schools.
- o a basic computer literacy package designed to teach elementary computer concepts.
- o a secondary-level textbook designed to illustrate programming concepts.
- o a list of examples of what several school districts are doing with computers.
- o a certificate for three free classes on BASIC programming and educational uses of computers.

Each school may also order a staff development package. We see this program as a complementary effort with our grants by the Secretary's Regional Offices for teacher computer literacy.

Commodore Business Machines has also donated 656 educational computer programs to the public domain. They have made these programs available to public and private schools throughout the United States.

One does not need large expenditures of funds to have an impact. One of the great developments of the revolution in technology has been the declining cost of computer hardware. It is important to be aware of the opportunities, especially low-cost opportunities, to get information out about and with the use of technology.

In terms of information sharing, which is an important key to advancing the state of the art as far as computer literacy education is concerned, sometimes a small effort can make a big difference. A recent example has come to my attention which involved Harold Wright, Secretary Bell's Regional Representative for Region V and one of the organizers of this conference.

A series of videotapes entitled, New Technology in Education, which were made from presentations at training programs sponsored by the Horace Mann Learning Center of the U.S. Department of Education, were mentioned in a letter by Mr. Wright, to Chief State School Officers, NDN State Facilitators, school officials and administrators, higher education institutions, associations and educational groups. As a result of his letter offering to share the tapes, numerous requests have resulted. There have been about 300 requests for one or more of the tapes of the series; many of these requests will result in more sets being produced. How much more inexpensive to use a training tape which can be used many times at different hours on different days over organizing a one-time seminar with speakers brought in?

This reaction to his offer shows not only the great interest that such groups of educators have in technology but that a little foresight can go a long way toward developing good access to information sharing. A relatively inexpensive means of valuable information sharing resulted from Mr. Wright's foresight and efforts. I commend him for these efforts. I am certain that others of you might have opportunities and will have opportunities to develop such cost efficient and helpful programs as well.

We must recognize that the computer revolution is not in the future but now and we must deal with that reality. Those who can't master the basics won't be able to deal with the complexities of their society. Planning and starting appropriate educational programs now is not too soon. The question has been raised in the past "Why can't Johnny read?". We are now hearing those who are beginning to ask the question "Why can't Johnny log-on?"

Let the response not be because he was never given the opportunity to learn. We all have the responsibility to educate the present generation so they can carry forth the torch of learning.

I commend you for your efforts and I wish you success at this important conference.